MARKED-UP VERSION OF THE AMENDED CLAIMS

1. (previously presented) A water jet device for separating of a biological structure, essentially comprising a pressure flow generator (1), an operatable control and automatic control unit (2) and a supply capillary (3) with a separating nozzle (14), wherein the separating jet exits from the separating nozzle (14), wherein the separating nozzle (14) is furnished with a nozzle channel (15) with a circular cross-section and wherein the separating nozzle (14) is disposed at the distal end of the supply capillary (3),

wherein the separating nozzle (14), as is known in principle, is disposed fixedly positioned and coaxial to the supply capillary (3) and wherein the nozzle channel (15) is furnished with at least one twisted groove (16) and wherein the number of the twisted grooves (16) and the diameter and the length of the nozzle channel (15) are placed in such a ratio to each other that the separating jet subjected to pressure is rotated.

2. (previously presented) The water jet device according to claim 1 wherein the slope of the spiral flutes (16) is dimensioned larger than the

diameter of the nozzle channel (15) and wherein the spiral flutes exhibit a slope angle of from about 30 to 45 degrees.

3. (previously presented)The water jet device according to claim 2 wherein the spiral flutes (16) exhibit a rounded cross-sectional shape.

4. (previously presented)The water jet device according to claim 1 wherein the supply capillary (3) is equipped with one or several additional separating tools for mechanical working of the biological structure in the region of the separating nozzle (14) of the supply capillary (3).

5. (previously presented)The water jet device according to claim 1 wherein the supply capillary (3) is made out of a current conducting material and is connectable to a high frequency current supply device.

6. (previously presented) A water jet device for separating of a biological structure comprising

a pressure flow generator;

an operatable control and automatic control unit;

a supply capillary connected to the pressure flow generator;

a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at the distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary ,

wherein the separating nozzle is furnished with a nozzle channel for forming a water jet to exit from the separating nozzle;

at least one spiral groove furnished in the nozzle channel and wherein the spiral groove and the diameter and the length of the nozzle channel are placed in such a ratio to each other that the flowing stream of water in the nozzle channel subjected to pressure is rotated and a rotating water jet is released by the nozzle channel.

7. (previously presented) The water jet device according to claim 6 wherein a slope of the spiral groove is dimensioned larger than the diameter of the nozzle channel and wherein the spiral groove exhibits a slope angle of from about 30 to 45 degrees.

8. (previously presented) The water jet device according to claim 7 wherein the spiral groove exhibits a rounded cross-sectional shape.

9. (previously presented) The water jet device according to claim 6 wherein the supply capillary is equipped with one or several additional separating tools for mechanical working of the biological structure in the region of the separating nozzle of the supply capillary.

10. (previously presented) The water jet device according to claim 6 wherein the supply capillary is made out of a current conducting material and is connectable to a high frequency current supply device.

11. (previously presented) The water jet device according to claim 6 wherein the nozzle channel has a circular cross-section modified by the cross-section of the spiral groove.

12. (previously presented) The water jet device according to claim 6 further comprising

a second spiral groove disposed running parallel to the first spiral groove in the nozzle channel.

13. (previously presented) The water jet device according to claim 6 wherein the separating nozzle has an overall shape of a hollow cylinder and wherein the nozzle channel has a shape of a hollow cylinder bore modified by the placing of the spiral groove.

14. (previously presented) A water jet device for separating of a biological structure, essentially comprising a pressure flow generator (1), an operatable control and automatic control unit (2) and a supply capillary (3) with a separating nozzle (14),

wherein an axis of the separating nozzle (14) coincides in direction with an adjacently disposed axis of the supply capillary (3),

wherein the separating jet exits from the separating nozzle (14), wherein the separating nozzle (14) is furnished with a nozzle channel (15) with a circular cross-section and wherein the separating nozzle (14) is disposed at the distal end of the supply capillary (3),

wherein the separating nozzle (14), as is known in principle, is disposed fixedly positioned and coaxial to the supply capillary (3) and wherein the nozzle channel (15) is furnished with at least one twisted groove (16) and wherein the number of the twisted grooves (16) and the diameter and the length of the nozzle channel (15) are placed in such a ratio to each other that the separating jet subjected to pressure is rotated.

15. (currently amended) [[The]] A water jet device ~~according to claim 6 further~~

for separating of a biological structure comprising

a pressure flow generator;

an operatable control and automatic control unit;

a supply capillary connected to the pressure flow generator;

a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at the distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary ,

wherein the separating nozzle is furnished with a nozzle channel for forming a water jet to exit from the separating nozzle;

at least one spiral groove furnished in the nozzle channel and wherein the spiral groove and the diameter and the length of the nozzle channel are placed in such a ratio to each other that the flowing stream of water in the nozzle channel subjected to pressure is rotated and a rotating water jet is released by the nozzle channel;

a pressure line leading from the pressure flow generator to the operatable control and automatic control unit;

a connectable pulse generator placed into the pressure line.

16. (previously presented) The water jet device according to claim 15 further comprising.

a laser device switched in parallel to the pulse generator.

17. (previously presented) The water jet device according to claim 15 further comprising

a heating device switched in parallel to the pulse generator.

18. (previously presented) The water jet device according to claim 15 further comprising

a freezing device switched in parallel to the pulse generator.

19. (previously presented) The water jet device according to claim 15 further comprising

a discharge capillary disposed parallel to the supply capillary and connected to the operatable control and automatic control unit through a discharge line;

an automatically controllable discharge pump connected to the discharge line.

20. (previously presented) The water jet device according to claim 13 wherein the

hollow cylinder has a length of an inner cylinder which is from about 1 to 5 times the diameter of the inner cylinder;

wherein the inner cylinder is furnished with spiral grooves;

wherein the width of the spiral grooves is 0.08 to 0.2 times the diameter of the inner cylinder of the nozzle;

wherein the depth of the spiral grooves is 0.2 to 0.4 times the width of the spiral grooves.

21. (previously presented) A method for separating biological structures comprising the steps of:

furnishing a water jet device including a pressure flow generator, an operatable control and automatic control unit, a supply capillary connected to the pressure flow generator, a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at the distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary;

making the water jet ready for operation such that the water jet is available with a correspondingly pre-programmed pressure, quantity and temperature ready for calling;

inserting, puncturing and piercing the supply capillary into the tissue;

leading the supply capillary into a boundary layer region of different tissues;

applying liquid in this boundary layer region in the following through the supply capillary;

forming an expansion space between different tissues; and pressing tissues apart from each other with the expansion space.

22. (previously presented) The method for separating biological structures according to claim 21 further comprising the steps of:

dissecting soft tissue components here already at the lowest pressures;

tensioning hard or elastic structures while remaining initially still uninjured.

23. (previously presented) The method for separating biological structures according to claim 21 further comprising the steps of:

supporting a dissecting process by a pulsating water jet in case of very firmly at each other resting structures.

24. (previously presented) The method for separating biological structures according to claim 21 further comprising the steps of:

deflecting a laminar flow of the water jet by spiral grooves disposed in a nozzle channel of the separating nozzle;

initiating a rotary motion in circumferential direction of the water;

directing a flow force of the water jet into the separating nozzle to be thereby subdivided into an axial remaining force component and a radially added force component;

forming a rotated water jet, where the laminar flow remains in the water jet since the tracks of motion of the individual water particles remain running further parallel to each other.

25. (previously presented) The method for separating biological structures according to claim 24 further comprising the steps of:

interacting a radially acting force component with the water jet and transposing the water jet increasingly into a region close to the circumference, where the water particles move with an increased circumferential speed;

forming a closed circulating separating edge in a form comparable to a wood drill in this region of the water jet, wherein this separating edge exhibits naturally an increased separating force relative to a straight water jet.

26. (previously presented) The method for separating biological structures according to claim 201 further comprising the steps of:

withdrawing a water amount entered through the supply capillary again from the tissue region through the discharge capillary if desired.

27. (new) The water jet device according to claim 1 further comprising

a pressure line leading from the pressure flow generator to the operatable control and automatic control unit;

a connectable pulse generator placed into the pressure line.

28. (new) A water jet device for separating of a biological structure comprising

a pressure flow generator for water;

an operatable control and automatic control unit;

a supply capillary connected to the pressure flow generator for supporting a flow of the water from the pressure flow generator;

a separating nozzle attached to the supply capillary and wherein the separating nozzle is disposed at the distal end of the supply capillary, wherein the separating nozzle is disposed fixedly positioned and coaxial at the supply capillary for guiding water coming from the supply capillary,

wherein the separating nozzle is furnished with a nozzle channel for forming a water jet to exit from the separating nozzle;

at least one spiral groove furnished in the nozzle channel and wherein the spiral groove and the diameter and the length of the nozzle channel are placed in such a ratio to each other that the flowing stream of water in the nozzle channel subjected to pressure is rotated and a rotating water jet is released by the nozzle channel.